

**The 'Most Wanted' of Animal Kingdom:
News Coverage of 'Invasive Species' in The New York Times**

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ABSTRACT

The purpose of this study is to shed light on how *invasive species* are conceptualised in *The New York Times*' coverage between the time frame 2000-2022, and how their coverage/representation reproduces anthropocentric speciesism. A qualitative content analysis is conducted to inspect news media coverage of *invasive species* in *The New York Times*. The results find a clear maleficent and threatening framing of *invasive species* in this newspaper. Especially metaphors and allusions to anthropocentric concepts are found to be present as framing tools. Discussion section further explores how these results can be interpreted as a reinforcement of speciesist ideology and anthropocentric thinking.

KEYWORDS

invasive species, critical animal and media studies, framing, news coverage, metaphor, representation, speciesism, communication, anthropocentric framing, The New York Times

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1. INTRODUCTION

What do a cat, a rat, a rabbit, and a green parrot have in common? Except for their names ending with the letter “t”, all of these animals are considered *invasive species*¹ in some places around the world. *Invasive species* are non-human animals who live outside of their original habitats and may cause harm to others. However, what makes a non-human animal invasive? Doesn't invasion require intent which most assume non-human animals are incapable of? What happens when a non-human animal is considered an *invasive species*? The answers to all of these questions are not only scientifically but socially and politically loaded. All of these questions and their possible answers are the inspiration of this study.

This study is about the framing of *invasive species* in the news media. Framing of *invasive species* in the news media is relevant to further explore the representation of non-human others in the media and what the representation of non-human others entails. It is especially interesting as it reflects loaded anthropocentric mental constructions.

The purpose of this study is to shed light on how *invasive species* are conceptualised in *The New York Times*' (NYT) coverage in between the time frame 2000-2022, and how their coverage/representation reproduces anthropocentric speciesism. Within this aim, a qualitative content analysis is conducted. The study embodies a Critical Animal and Media Studies approach to evaluate the topic within a critical perspective taking speciesist ideology into attention.

The paper begins with clarifying a definition of *invasive species* according to scientific and official sources. Then, it moves on conducting a literature review on representation and media coverage of *invasive species*. Subsequently, methodology of the research is explained. Afterwards, results of the qualitative research are revealed and furthermore, discussed. The results find a clear maleficent and threatening framing of *invasive species* in *The New York Times*. Especially metaphors and allusions to

¹ The term *invasive species* is merely used because it is the term used by media and this study focuses on the conceptualization within the term. Italic formatting is to highlight the terms are not sanctioned but used because it is how they are used in the inspected area.

anthropocentric concepts are found to be present as framing tools. The discussion section further explores how these results can be interpreted through a reinforcement of speciesist ideology and anthropocentric thinking.

2. STATE OF THE QUESTION

To start with the established scientific and official position of *invasive species*, different intergovernmental, governmental, non-governmental and international agencies define *invasive species* as alien species with negative impacts on biodiversity and human ecosystems.

The Convention of Biological Diversity (CBD), an international part of the UN Environment Programme defines *invasive species* as an alien species posing a threat to ecosystems, habitats or other species. According to CBD, “invasive alien species” pose a great threat to biodiversity and ecosystem services, especially in islands. Likewise, CBD states “invasive alien species” possibly can threaten food security, human health and economic development. The CBD’s definition does not talk about human agency but highlights “increasing trade and travel” could increase the threat of *invasive species*.

Similarly, The United Nations (UN) itself alludes to *invasive species* as a threat for biodiversity under Sustainable Development Goal #15: Life on Land in its Sustainable Development Goals Report 2021. However, the *invasive species* threat on biodiversity is indirect due to resource competition and habitat alteration (Davis 2009 cited by NISIC) except predation (European Environment Agency 2020).

On the other hand, the International Union for Conservation of Nature (IUCN) stresses human agency in its definition by stating: “An alien species is an animal, plant or other organism that is introduced by humans, either intentionally or accidentally, into places outside its natural range. Some alien species – classed as ‘invasive’ – become established and negatively impact native biodiversity, as well as ecosystem services on which humans depend.”

The European Commission's definition of the *invasive species* also includes the aspect of intentional or accidental introduction of species and highlights negative consequences. There is a 2014 dated EU Regulation (EU) focusing on “invasive alien species” with a three pillar “internationally agreed hierarchical approach” consisting of prevention, early detection and rapid eradication, management. The European Commission also recognizes tourism, trade and climate change as drivers of proliferation of *invasive species*.

National Invasive Species Information Center (NISIC) under The U.S Department of Agriculture (USDA) defines *invasive species* as non-native or alien species whose introduction is detrimental for environment, economy and/or human health. Their definition counts “human actions” among primary means of introduction.

The organisations justify their definitions of *invasive species* with scientific and statistical facts. For instance, *invasive species* have been said to have a global economic cost of \$1.288 trillion in the last 50 years. (Zenni, R.D. et al. 2021 cited by NISIC). In addition, according to the researchers some *invasive species* such as Asian tiger mosquitoes may serve as vectors for infectious diseases such as Dengue fever and pose threats to human health (Benedict et al. 2007 cited by NISIC). Likewise, in terms of biodiversity, the European Environmental Agency says “Of the 395 European native species listed as critically endangered by the IUCN Red List of Threatened Species, 110 are in danger because of invasive alien species.” (European Environmental Agency 2020).

3. THEORETICAL BACKGROUND

Initially, the term *invasive species* usually denotes non-human animal species that cause economic and/or environmental harm to humans or other non-human animals' interests, in the environment they are not native to. However, *invasive species* are represented beyond their merely “harmful” impact in the literature. Therefore, communication of *invasive species* becomes more than just stating a neutral description, open to several discursive manipulations.

Communication here entails a broad meaning, including how language is used, words are chosen, narratives are built, species are portrayed and represented in any medium from traditional news media to the language itself. This kind of broadness helps to grasp the representation of *invasive species* with different ecological, geographical, political, social, cultural underpinnings.

Research perspectives illuminating this research comes from such broad understanding of communication from a Critical Animal and Media Studies angle. Therefore, I build my theoretical background in 2 sections: First, I discuss how *invasive species* are generally represented through distorted discourses of nativity, movement and nature drawing from literature. Then I introduce a media chapter where I explain framing theory and examine the previous academic findings on the news media representation of *invasive species*.

3.1. Critical Animal And Media Studies

This study deploys a Critical Animal and Media Studies (CAMS) perspective when exploring the news coverage of *invasive species*. The CAMS perspective fits with the aim of this study as CAMS is the sole sub discipline of Critical Media Studies which has an ethical consideration reaching beyond human animals. Critical Animal and Media Studies extends the normative-moral stance of Critical Media Studies to often ignored subjects, non-human animals and their exploitation by anthropocentric power relations. It aims to expose the hegemonic knowledge production and dominant ideologies around discourses regarding non-human animals. Along with that exposé, another aspiration of CAMS is to open the door for morally grounded and real egalitarian scenarios for all animals (Almiron et al. 2018).

3.2. Representation Of 'Invasive Species' In The Literature

According to the literature, the representation of *invasive species* is built within several anthropocentric, speciesist, unethical and scientifically incoherent frameworks on nativity, anthropomorphisation, natural history and science.

a. Dichotomy of Nativity

Scholars working on science communication and representation of *invasive species* draw attention to the binary nature of the *invasive species* (Larson 2008; van der Weele et. Van Der Boomen 2008; Menozzi 2014; Davis 2021; Warren 2021). According to this, *invasive species* are always represented coupled with their “nativity” status. Non-nativeness of *invasive species* is always highlighted in their representation. Etymologically, an invader means a foreigner, someone from the outside threatening inside. Invaders are non-native by definition thus connecting *invasive species* with non-nativeness. Yet, this representation of non-human animals according to their nativeness does not reflect an objective portrayal of how nature and the world work but rather an anthropocentric one where imagined political and cultural standards of human society such as belonging, citizenship, nationality adhere to non-human animals (Vogelaar 2021). Within this representation, non-natives are usually deemed undeserving and less important (Seymour 2013). Moreover, coupling *invasive species* with “non-nativeness” may imply these species “are dangerous precisely because they are not native” (Inglis 2020, 302), although it is proven that even indigenous species can show the same harmful behaviour (Robbins 2004). Thus, the specific language used to frame these species may exacerbate “xenophobia” (Holmes 2013; Lioy et. al 2019; Inglis 2020; Davies 2021; Warren 2021) and irrational fear of certain non-human species (Inglis 2020). In addition, labelling species as “invasive” usually evokes strong metaphors of war and invasion (Fine et Christoforides 1991; Larson et al., 2005; Larson 2008). Invasiveness is a socially constructed anthropological trait. Deeming species as “invasive” is anthropomorphising (Bartosch 2019) and assumes a maleficent intent (Inglis 2020) as if these non-human animals were to sail through the ocean and invade other continents by their own will and agency. Similarly, depiction of “invasiveness” of *invasive species* is usually combined with military underpinnings (Larson et al., 2005; Larson 2008). So frequently that former U.S president George W. Bush merged the specific part of the Animal and Plant Health Inspection Service regarding *invasive species* into the Department of Homeland Security when he was in the White House, deciding ‘terrorist activity’, ‘pests’ and ‘weeds’ should be under the same roof (Larson 2008).

Against this hostile representation, science communication studies offer different representative frames transmitting *conservation*² efforts. For example, a study focusing on Zebra Mussels (Shaw et al. 2020) recommends staying away from metaphorical frames for ethical reasons and shows a science framing with a neutral language could work just as well measuring the impacts of different frames.

b. An Anthropocentric Representation of the Species Movement

Beyond language, another failed aspect is how representation of *invasive species* is based on a flawed anthropocentric understanding of species movement.

First, most of the *invasive species* have been introduced by human agency being abducted from their native habitats dominantly within colonial expansion (McNeely 2001 cited by Menozzi 2014). Likewise, Alfred Crosby's concept of 'ecological imperialism' critically highlights the human agency in the proliferation of *invasive species* as "a process of remaking nonhuman life through the constitution of new multispecies assemblages" (Robbins 2004, Menozzi 2014, Ogden 2018). These species simply happen to cooperate well to their new habitat to dominate the use of resources to survive indifferent to another species' harm. From this perspective, their incorporation could have been framed as natural selection or cosmopolitanism (Warren 2021), as once Victorians saw it (Voskuil 2021), rather than an evil invasion.

To continue, this depiction downplays human agency and erases humans' historical and political responsibility, placing the blame on the non-human *invasive species*. As a result of their representation, unethical and inconsiderate methodologies such as exterminating or sterilising are deployed against them. To avoid "the systematic devaluing of animal life" (Inglis 2020, 300), human responsibility should always be present (Hart et. Larson 2014) in the representation of *invasive species*.

² *Conservation* here adheres to the *conservation* of the designated state of nature ideal to the human interest and human mind (for more info see Appendix 2). Again, the term *conservation* is merely used because it is the term used by mainstream media Italic formatting is to highlight the terms are not sanctioned but used because it is how they are used in the inspected area.

Second, this flawed representation may lead to the stigmatisation of animal movement on its own, distorting the biogeographical history. Animals have been migrating for various reasons such as breeding, climate, geography (Vogelaar 2021) for thousands of years. Labelling these cyclical or one-time migrations as invasion once again provokes speciesist discourses on who gets the freedom of mobility or choice of livelihood and who doesn't.

A more suitable alternative here is proposed by Laura Ogden: "Reframing *invasive species* as the migration and settlement of nonhuman beings as diasporas" (Ogden 2018, 64). In addition, scientists cannot always and precisely determine when a species arose or was settled in one place. Hence even the "most native" or endemic species might have been "invasive" prior to human knowledge. This results in a simplifying bias in the representation of complex biological processes (Inglis 2020). Such bias indeed refutes the arguments based on nativity as Meera Inglis states, "if we cannot say with any certainty which species arrived when then the whole concept of nativeness already seems to be built on shaky ground" (Inglis 2020, 306). Other scholars, Sol Hart and Brendon Larson (2014), recommends representing *invasive species* as "passengers" who are mobile in the face of environmental changes instead of "drivers" of ecological impacts.

c. 'Invasive Species' As Cracks In Utopic Nature

On the other hand, two scholars, Paul Robbins and Sarah Moore question the roots of such biases: "Are ecological phobias a form of political disorder?" (Robbins and Moore 2012, 10) According to them, all of these asymmetries in the representation of *invasive species* might be read as an "ecological anxiety disorder" arising out of the fear felt against own's, humans', established negative influence on the planet and science. This diagnosis attempt recalls the psychological concept "projection" and politics of demonisation for own's interest. Additionally, in a planet where nothing is permanent but change, ever-changing nature becomes impossible to possess for humans hence spawning the loaded interpretive packages (Robbins et. Moore 2012). With that, nature is fixed to a utopic description, an ideal state of being where novelties such as *invasive species* are excluded or deemed disruptive. Interestingly, this Edenic portrait becomes

an example of ‘human exceptionalism’ (Bartosch 2019) as, without a doubt, humans are the biggest disruptors.

3.3. ‘Invasive Species’ Meets The Media: ‘Invasive Species’ Portrayal In The Media According To The Literature

a. Framing Theory and Allegorical Framing

From a theoretical perspective, Goffman’s (1986) framing theory and Lakoff’s (1980) notion of metaphorical framing are prominent tools to study *invasive species* in the media (van der Weele et. Van Der Boomen 2008; Larson 2008; Bartosch 2019). The cult work of Erving Goffman theorises framing as an inevitable and, by design or not, a naturally occurring cognitive process. Humans cannot help but organise their quotidian experiences as “fictive realms of being” by consistent interpretation of “accents of reality” (Goffman, 1986). Definitions of scholars draw attention to the frequency and discursive features of framing composed of “persistent patterns of cognition, interpretation, and presentation, of selection, emphasis and exclusion by which symbol handlers routinely organise discourse” (Gitlin, 1980, quoted from de Vreese, 2005, 52-53).

On the other hand, metaphorical framing emphasises the power of metaphor. Through figurative language, the metaphor makes a statement that conveys an idea (Brooks and Warren 1960, cited from Stern, 1988, 85). These ideas do not function as mere food for thought; instead, they are rhetorical tools to comprehend and evaluate fundamental issues. Metaphors can play “a central role in the selection and framing of political problems and purported solutions” (Davies 2021, 9). In addition, scholars also draw attention to the inevitability of narrative and the habit of employing metaphors in the framing of scientific and technical information to make it easily understandable and salient in the public eye (Leppanen et al. 2019).

Moreover, framing creates an impact on the reader by shaping public opinion (Gerald et al., 2019). In the case of *invasive species*, it can make or break their reputation, which is vital for their survival. The perceived charisma of a particular *invasive species* can seriously alter public acceptance (Nuñez and Simberloff 2005; Verbrugge et al. 2013 cited by Jarić et al. 2020). Studies show public support can be a determinant in

invasive species management policies (Lioy et al. 2019), especially with the proliferation of social media and heightened contact between public-experts-scientists in social media channels (Shaw et al. 2020).

b. Assessing Representation of ‘Invasive Species’ in The News Media

As for representation, authors have found that the representation of *invasive species* in the media is not fixed and always includes an uncertainty depending on the location or the species involved (Fraser 2006; Bremner and Park 2007 cited by Lioy et al. 2019). Studies show that media attention is not directly associated with the production of scientific research, and scientific research is not correlated with the magnitude of ecological effects of *invasive species* (Geraldi et al. 2019). This proves that both media and science deliberately produce discourse on the issue without scientific (for media) and ecological (for science) reasons. Correspondingly, case studies yielded interesting results illustrating how views are endless and attributed qualities are all in all just a reflection of one’s own eyes. The academic publications on *invasive species* and media/communications mainly focus on singular case studies contextualised within specific species and locations. These studies discuss *invasive species* framing and how framing leads to a public opinion about those species’ characters as benevolent or maleficent. These aside, some of the studies also focus on science communication and possible communication campaigns to get public support for new *conservation* policies. This second group illustrated an opposite aspect: while some of the papers recognised ethical considerations to be considered about *invasive species*, some disregarded ethical suggestions. Once again, science recognised by its distanced and objective voice (disputably) becomes quite dramatic when it comes to the question of *invasive species*.

Starting with media cases creating a benevolent perception of *invasive species*, these examples often reflect a cultural or economic construction of benefit and the imagined persona of the *invasive species*. The most prominent example would be cats. Cats are considered to be globally *invasive*, yet empirical studies show they are only marginally framed as *invasive species* in the media (Gow et al. 2020), most probably due to their anthropocentric role as companion animals. Another case study highlights the

hippopotamuses Pablo Escobar illegally brought to his farm in Colombia, which turned out to be *invasive species* and spread to the habitat from Escobar's private zoo. Although conservationists offered to kill the hippos, government authorities were distant to the idea as they did not want to contribute to Colombia's infamous media portrayal as a violence-ridden country (Karlsson 2016) and due to tourist attraction and colourful media portrayal hippos provide for Colombia (Jarić et al. 2020). This unique case shows the political economy of *invasive species*; Colombian authorities decided to favour the *invasive species* maybe only because they had a myriad of interests at stake. Likewise, the case of grey squirrels in Italy illustrates how fictional imagery and culturally attributed identity can turn the discourse. When authorities had a control program for grey squirrels, including measures such as sterilisation and extermination, newspapers and animal rights groups mobilised around the issue succeeding in legally obstructing the eradication campaign in the end (Genovesi and Bertolino 2001; Shackleton et al. 2019 cited by Jarić et al. 2020). They used emotive messages, endearing cartoon depictions of squirrels and an echo to the Holocaust (f.e: gas chambers-euthanasia of animals). Along with these messages, squirrels' traditionally positive representation in children's books and cartoons also increase their social acceptability as an *invasive species* (Lioy et al. 2019).

On the contrary, maleficent depictions of *invasive species* exemplified a manipulative frame distorting reality and invoking negative fears among readers, sometimes calling upon anthropocentric issues under the cloak of *invasive species*. For instance, when a couple of Asian giant hornets were seen in North America, with no proof of establishment but only potential as they are considered to be "invasive", media gave a sensationalist response calling the bees "murder hornets" when, according to scientists "It is no more likely to sting and kill a human than a honey bee" (Garvey 2020, 1). With the media's fear-mongering, random winged-bug images claiming to be of Asian giant hornet started to circulate on Facebook, overhyping an incredibly exceptional danger (Garvey 2020). On the other hand, the media also instrumentalises negative depiction of *invasive species* for their agenda. To illustrate, the right-wing British tabloids are shown to be selectively covering *invasive species* to invoke anti-immigrant and nationalist sentiments by metaphorical linkage around politically sensitive debates (Davies 2021). A graphic example of this would be when *The Express* branded an "invasive" ant species as "Turkish" while the United Kingdom was frequently discussing

Turkey's possible EU membership and Turkish immigrants. The newspaper claimed an 'Army of Turkish SUPER ANTS' were 'to Destroy UK nature' with a photomontage depicting "the ants standing before a Turkish flag like standard-bearers in an occupying force". (Davies 2021, 3) However, the ants were not even called "Turkish", and they had an even greater native range in the United Kingdom than in Turkey. In this case, facts were distorted, creating an artificial existential threat posed by ants to set an anti-immigrant right-wing agenda with more salience.

Thirdly, some species stand in-between. For example, monk parakeets, who were recently killed in Madrid for "invasiveness" (El Pais 2021), were championed years ago in New York, with advocates talking about their innocence of wrongdoing and undeserving of death (Seymour 2013).

3.4. Burden Of 'Invasive Species'

To summarise, according to the literature, *invasive species* are represented through binaries of nativity and anthropomorphisation by the attributed "invasiveness" based on distorted understandings of nature and natural history. As a result, non-human animal *invasive species* burdens an unbalanced responsibility and blame for the unintended consequences of their existence. Correspondingly, scholars offer ethical, socially, and historically aware frameworks to represent *invasive species* in a fairer light and mitigate environmental challenges due to interspecies interaction and climate change.

Moreover, the previous academic work on the news media representation of *invasive species* shows different framings that can be classified as benevolent, maleficent and neutral. The different framings reflect deeper cultural, political, economic and social determinants in the representation of *invasive species*. Whether they are doing the same thing or not, whether they have the intent or not, their fate is inextricably linked with "their PR". If they have positive talkability, they get to live. Nevertheless, depending on how they are framed contextually, sometimes they have to take a significant burden, sometimes as great as death itself.

4. DESIGN AND METHODOLOGY

4.1. Overall approach and rationale

Anyone taking a stroll in the streets of Barcelona, Istanbul or New York would realise monk parakeets flying from tree to tree chirping melodically if only they were slightly paying attention. And if they have average geography knowledge, they would also realise these birds do not “belong” to those habitats. Parakeets are famously tropical birds associated with the imagery of the jungle. Sure, they are owned as pets everywhere in the world but living in the urban greenery on their own? How does that happen? The explanation lies in the term *invasive species*. Correct, when they live in a cage owned by a human, parakeets are pets, but when they somehow manage to survive and breed independently out of their native habitat, they are called *invasive species*. This dilemma inspired this research to explore how animals who exist and behave out of human-designated boundaries might be conceptualised as *invasive species*. The research will be studying the framing of *invasive species* in *The New York Times* (NYT) to explore possible answers.

The purpose of this study is to shed light on how *invasive species* are conceptualised in their news media coverage in *The New York Times* between the time frame 2000-2022 and how their coverage/representation reproduces anthropocentric speciesism. The research questions that guide this study are as follows:

1. How are *invasive species* positioned/conceptualised in the NYT?
 - a. A framing analysis evaluating the coding valence (positive, negative, neutral) will be applied.
2. By what means are *invasive species* positioned/conceptualised in their NYT coverage?
 - a. Textual and visual elements of framing will be analysed.
3. Are there any differences between the positioning/conceptualisation/representation of several *invasive species* such as rabbits vs. rats?
 - a. Framing of different *invasive species* will be compared.

The framing of *invasive species* in *The New York Times* will be examined by conducting a qualitative content analysis on each news article sampled. As in the name, framing theory will be deployed in the analysis section. Everything about the articles; including headlines, visuals, and textual elements will be taken into account in the content analysis. Focusing on language and communication of the *invasive species*, the research will be aiming to explore and analyse the underlying politically, culturally and socially constructed meanings.

4.2. Site and sampling strategies

The New York Times is chosen as a research site as one of the most prominent and relevant news publications in English with a significant global reach. While *The New York Times* has more than 9 million subscriptions for its digital and news media content in the United States and the world; its digital news subscriptions signify more than 1 million international readers alone. Moreover, the Dow Jones database Factiva produces a reasonable number of articles with the keyword search *invasive species*, therefore showing *The New York Times* is a viable site to analyse news coverage on *invasive species*.

The unit of analysis is news articles on *invasive species* that are fully available online and published in *The New York Times* between 2000-2022.

Population of this research vastly would be every news article containing the keyword *invasive species* published in *The New York Times* between 2000-2022 but due to practical reasons, for its accessible population, the research will only include online news articles and digitalised news articles fully available online. Population selection will be made within a time span of the years 2000-2022. In addition, the articles containing keywords *invasive species* without literally or figuratively elaborating on the subject of non-human animal *invasive species* in any way won't be taken into account as analysing those articles would be distorting their meaning hence becoming unethical.

To eliminate such errors, the sampling strategy consist of rounds. First round will be reading to purposefully explore, weed out irrelevant articles and accumulate information-rich articles for the second round. Second round will be sampling articles

for the research. The sample size is 146. The articles are found through searching the keyword “*invasive species*” and then picking the results in the order they appeared.

4.3. Data collection methods

The research technique will be qualitative content analysis. By using qualitative content analysis, the research aims to explore the framing of the *invasive species* in *The New York Times*. The object to be examined, the framing of *invasive species*, is not a numerical but a qualitative phenomenon. Qualitative content analysis proves to be a suitable method for this aim as a socially constructed phenomena will be studied and the studied unit will be news articles (content).

Qualitative research is defined as “an umbrella term covering an array of interpretive techniques which seek to describe, decode, translate, and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world” (Van Maanen 1979, 520 quoted by Merriam et. Tisdell 2016). Likewise, qualitative analysis can be conceptualised as “an effort to understand situations in their uniqueness as a part of a particular context” (Patton 1985, 1 quoted by Merriam et. Tisdell 2016). Similarly, “an effort to understand” is at the heart of content analysis as well (Hsieh et. Shannon 2005). Content analysis focuses on “the characteristics of language as communication with attention to the content or contextual meaning of the text” (Hsieh et. Shannon 2005, 1278)

These definitions naturally fit with the activity of examining news content to understand the framing of *invasive species*. Even the whole concept of a species defined by and named with *invasiveness* winks at qualitative content analysis as it shows how an oasis of meaning exists under the veil of human-made linguistics.

A coding sheet (see appendix 1) will be used for content analysis in order to assure standardised and reliable evaluation criteria. The elements of the coding sheet are clarified in the coding instruction sheet (see Appendix 2).

Before proceeding with the full analysis, I conducted a pilot analysis on 5 articles to check and refine the coding sheet. A few relevant amendments were made after the pilot and thanks to this the coding process took place smoothly.

4.4. Data analysis procedures

The data analysis procedure will be circular and flexible due to the qualitative and inductive nature of the research. After the data collection, data will be analysed by a coding process including thematic classification and note taking. The outcomes of the coding process will be compared and contrasted to the theoretical framework and findings of literature review. As the literature review suggests theory triangulation will be applied. Framing theory, theories regarding “metaphor” and theories about the conceptualisation of *invasive species* will be considered during the analysis.

As the research embodies a qualitative method, the importance is allocated to presence and exploring meaning. That being said, comments regarding how common or uncommon a phenomenon found in the news coverage is will be included.

Research questions will be the guide of the data analysis. The research questions and their definitions are:

How are *invasive species* positioned/conceptualised in the NYT?

1. Good–Bad–Neutral

- a. A *good* framing is identified when the sentience of *invasive species* is emphasised by the news or their existence is favoured/seen as benevolent due to any reason such as tourism, animals considered as “exotic” or the popular imaginary belief that those animals are “cute”.
- b. A *bad* framing is identified when the *invasive species* are deemed as maleficent, threatening, pests and beings that need to be handled with a *conservation* method such as extermination or sterilisation.
- c. A *neutral* framing is identified when the news story on the *invasive species* is reported objectively, without much morally and emotionally loaded descriptions, as much as possible.

2. By what means are *invasive species* positioned/conceptualised in their NYT coverage?

- a. Textual: What metaphors are used? What emotions are mentioned connected to the *invasive species*? How are *invasive species* presented with verbs (active/passive)? Which adjectives are used to define *invasive species*?

- b. Visual: How the visual depicts *invasive species*? For example: alive/dead, free roaming/captured, caricaturised with anthropomorphised features/photograph, farmed/on a plate/on a cage, etc.
 - c. Location: Present in news regarding themselves, environment, science, nature versus present as metaphors in news regarding politics, economics, lifestyle, health, etc.
 - d. Under which section
 - e. Species
3. Are there any differences between the positioning/conceptualisation/representation of several *invasive species* such as rabbits vs. rats?
- a. Positioning of *invasive species* as favourable-good/bad/neutral will be cross matched with the outcomes of this question

4.5. Anticipated limitations and ethical issues

Due to the project's time frame and natural borders, it will be difficult to conduct an extensive analysis covering the mainstream media ecosystem. The analysis will be limited to *The New York Times*. A self-selection bias will also be inescapable in the sampling process. There is also a risk of being reductive within the research's focus.

The research does not include any human participation; the anticipated ethical issues are minimal. One possible ethical issue might be copyright issues; although non-commercial academic use of news articles usually is not subject to copyright it might be required to get the publisher's permission to partially use and/or quote the articles.

4.6. Significance of the study

Although the relatively fresh field of Critical Animal and Media Studies houses much-published work on the intersection of speciesism, non-human animals, and the media, *invasive species* as a subject seems to be only examined through a Critical Animal Studies perspective meaning the majority of the published work does not examine *invasive species* and media together. The ones who do, usually focus on singular case studies about a particular species. Likewise, other disciplines such as science communications usually study *invasive species* as a problem to be dealt with and

media as a way to influence public opinion and policies, rather than critically questioning the concept and media coverage of *invasive species* itself.

Therefore, it will be significant to study the coverage of *invasive species* in *The New York Times* as a sub domain of news media, specifically through the lens of Critical Animal Media Studies. The study will highlight how *invasive species* are framed. Highlighting the framing could be ethically significant for media ethics while it carries a vital importance for the *invasive species* themselves. As shown by studies (Lioy et al. 2019) media plays a central role in shaping the public opinion about *invasive species* and *conservation* policies to be adopted or not. If the framing is biased, it means public opinion is somehow manipulated and *invasive species* are killed partly thanks to their framing. This could urge a change in a) the evaluation of *invasive species* as a loaded term and b) the reporting of *invasive species* in the media (narrative, framing, etc.).

4.7. Expected outcomes

The research will identify the framing of *invasive species* in *The New York Times* through qualitative content analysis. The identified frames will be most likely anthropomorphising *invasive species* in line with the findings of literature review. The news articles will be framing *invasive species* without taking their subjective interests into account yet exaggerating their agency with an imaginary intent of “invasion”. Although these are expected results; news articles with critical look are also expected to be found providing a silver lining. Most expected outcome of this research will be revealing entanglement of *invasive species* as a human-made terminology with political economy, environmental anxieties, sociocultural dispositions. Hence, inspiration to take another look at humanity’s socially constructed meanings and how these meanings influence other animals’ lives is an expected outcome.

5. RESULTS

5.1. Overview

A total of 146 news articles containing the keyword *invasive species* published in *The New York Times* between the years 2000-2022 were analysed. Most articles were between 900-1300 words long. Articles are mostly published under the Science

section. Articles published under Opinion, City and Other (including United States, World, Books and Food) sections subsequently follows.

As for the types of *invasive species* in the focus of news articles, most coverage is devoted to insects, marine species, *invasive species* as a general category and others (mostly reptilians such as snakes, lizards and frogs). Avian species and mammals follow. Among mammals, cats have the highest news coverage as *invasive species*.

The results show that *invasive species* are generally conceptualised as maleficent and/or threatening, even when the frame includes a critical aspect. Critical framing is occasionally found in the media coverage of *invasive species* and acknowledges the depths of the subject yet it does not correlate with the lack of negative frames. As clarified in the coding instruction sheet, a critical framing is when *invasive species* are framed by questioning the term, its underpinnings and how humans approach *invasive species* in any way. In fact, benevolent and innocent framings are exceptionally found in the news coverage. The results for the sample of news from *The New York Times* analysed here aligns with the literature: it also tends to frame *invasive species* as exotic while applying maleficent and threatening frames at the same time. These conceptualisations are built through metaphors and anthropocentric allusions. In addition, the subjects of human responsibility, *conservation* methods and visual elements contribute to the framing of *invasive species* by further amplifying the negative framings.

5.2. Metaphors

Metaphors are found as evident textual elements as a means to frame *invasive species*. *Invasive species* are framed through anthropomorphising and non-anthropomorphising metaphors. The type of anthropomorphising metaphors found can be divided into two; the first group includes adjectives and associations while the second includes verbs/actions.

In the first group, in which metaphor is built through adjectives and associations, metaphorical framing charges *invasive species* with character traits and identities. For instance, metaphors such as “expensive guests”, “willy wanderer”, “bored carnivorous

tourist”, “exotic immigrants”, “illegal immigrants”, “stowaway” and “nomadic” highlight their foreign, non-native status.

Likewise, maleficent and threatening framings are set through defining adjectives such as “villainous”, “troublemaker”, “ill-tempered eating machines”, “voracious”, “stubborn”. In some places, these framings are intensified by much more politically charged nicknames like “pariah”, “gypsy”, “Hobbesian”, “Judas goat” and “notorious insect equivalent of Jesse James”.

On the other hand, even though rarely, sometimes *invasive species* are framed through more sympathetic metaphors, such as “toddlers”, “baseball team”, “Brooklynners”, all emphasising their relatability. It is important to note that not all species get to be painted in a more sympathetic light. The usual narrative of the articles is one or at best two dimensional when the news article included a general critique of the term *invasive species* or mentioned the cognitive capacity of the species in question. To illustrate, the *invasive species* who get the press sympathy and a more complex framing are some mammals (cats, horses, hippopotamuses) and some avian species (parrots, flamingos, swans). For instance, when speaking about the possible extermination of swans in New York the news article draws a resemblance between the culling and swans being on a death row. Swans are also defined as “graceful”, “symbols of romantic love” and “the stuff out of fairy tales and Tchaikovsky”.

The second group of anthropomorphising metaphors found in the analysis are actions. In the analysed sample of *The New York Times*, *invasive species* do not merely move, live, survive, reproduce or hunt. They are “hitchhiking”, “squatting”, “occupying”, “conquering”, “colonising”, “thwarting their best laid plans”, “setting up its shop” and even “plotting a hostile takeover”. Animals’ actions are over interpreted by metaphors and charged with anthropocentric meanings.

Furthermore, when non-anthropomorphising metaphors are also used in *invasive species’* framing in *The New York Times*, it mainly serves to sketch a horrendous imagery or to objectify the animal. Initially, the news articles show that *invasive species* are defined by metaphors of mythological creatures such as monsters, vampires, dragons or witches. Similes are made to cult literary creatures such as Frankenstein

and Jaws along with general metaphors of “horror movies” and “nightmare”. Completing this bad image, metaphors evoking war and violence such as “razor tooth”, “murder”, “fish torpedoes”, “war plane”, “Apocalypse Now”, “Most Wanted list”, “rototiller”, “timebomb”, “nuclear bomb”, “quagmire”, “biological bullet”, “green feathered terror”, “six legs of trouble” and “freshwater fish equivalent of a tank” are present in *invasive species* coverage of *The New York Times*. In addition, “Russian roulette” as a metaphor is used to evoke risk.

Moreover, non-anthropomorphising metaphors are also found to be used in an objectifying manner. *Invasive species* are defined as “trash”, “decorative rug”, “newly polished shoe”, “aquarium eye candy”, “Chevrolet” and “pennies”. In addition, some news articles frame *invasive species* as food by metaphors such as “fruit de mar”, “slippery snack”, “Jell-O of the sea”, “popcorn”, “pistachio” and “Kentucky tuna”.

5.3. Anthropocentric Allusions

Through metaphors and other expressions, the framing of *invasive species* in the sample sometimes alludes to anthropocentric political issues such as war, invasion, colonisation, immigration, xenophobia and poverty.

Framing of prevention and *conservation* are found to be especially allusive. People are “keeping watch on an enemy army”, “like any good soldier”, “uniting against one common enemy”, conducting a “crusade” and “declaring victory”. Likewise, *invasive species* are “really made for invading”, “taking over people’s country”, “having political teeth”, “particularly adept at hidden warfare”, and “paying a price for conquering”. Additionally, feral pigs chewing the fence of a military installation in Texas are found to be interpreted as “a national security problem”.

On the other hand, native species are portrayed with fragility and interesting allusions were drawn. For instance, an imagery of privileged, entitled couple midst of chaos and insecurity coming from poor, foreign or unfavourable people is alluded when a pair of native species under protection is defined as “The couple looked trapped in its safety, like those people in Manhattan who secure their apartments with eight locks on the front door.” (26).

There are a few exceptions where non-native species are framed in a favoured light by allusions. One is the critical and positive immigration allusion about swans in New York and the other was the very curious case of wild horses in Australia. In the first case, an extermination plan of mute swans in New York is framed with the reactions of public drawing analogies to immigration such as “If they were born here, they should be considered native by now” and “Is that how we treat immigrants?” (38). In the second case, wild horses, whose descendants were European horses, are framed through Australian identity politics (indigenous vs. settler). The news article mentions how wild horses are symbols of “white Australian nationalism” and “rugged individualism” which became “a talisman for those holding on to nationalist visions of Australia’s history” in “a culture war”.

Subsequently, in the articles of the sample in which *invasive species* are figuratively present, the framing always alludes to anthropocentric political issues. A relevant example is an Opinion piece where Islamic State is compared to *invasive species* and “President Obama’s air war” is like “carefully use extermination agents” and “his efforts to forge a national unity” is “preserving healthy native habitats”. Another example is found in a Book Review where the author draws a resemblance between her experience as an immigrant to *invasive species*, “beast of no nation”.

By contrast, another news article titled “Beware of Cold-Blooded Americans” is teasing the readers with an imagery of American imperialism as an opener, just before introducing the real subject of the article: an *invasive species* aka a turtle native to the United States. To illustrate, the article begins with this quite strong introduction:

AMERICANS are predatory. They invade other countries, prey on native populations and exploit their resources. They are typically voracious, opportunistic and highly adaptive. It is said they are filthy; they can tolerate living in polluted areas and can carry diseases to which locals have no immunity. As we speak, they are causing global ecological damage. We are talking, obviously, about American red-eared sliders — semiaquatic turtles originally from the southern United States. (9).

5.4. Human Responsibility

Human responsibility for the spread of *invasive species* is almost always mentioned in the articles. Humans' vast effect and responsibility on the proliferation of animal species around the world causing some species to become *invasive species* are recognised. Sometimes international trade and regional agreements are mentioned as facilitators (f.e: Schengen Treaty and Suez Canal). However, this recognition almost never reflects on the framing of *invasive species* as being innocent. Instead, *conservation* methods are almost always mentioned and urged as shown below.

5.5. 'Conservation' Methods

Conservation methods are almost always mentioned in the analysed sample. *Conservation*, as mentioned in the Coding Instruction Sheet (see Appendix II), mostly reflects an environmentalist stance putting greater importance on an imaginary "ecosystems balance" than considering every sentient being as an individual with the right to live. For example, one article takes the presence of *invasive species* as an indicator of "corrupted terrain" disrupting the "pristine" landscape. Another article provides an environmentalist account of biodiversity by claiming *invasive species* "are heralding an era of creeping sameness" and causing the world to become "a McDonald's ecosystem". That being said, here and then some articles also provide criticisms to the environmentalist approach of "vilification of *invasive species*" and "the outdated ideal of wilderness as a pristine place".

The most mentioned method is extermination; other methods such as sterilisation, import bans, education, restricting movement, bioagents and eating are also sometimes mentioned.

All *conservation* methods are usually urged by the journalists. When condemned, criticism of *conservation* methods is not always based on ethical concerns but on ineffectiveness.

Besides, when the criticism is based on ethical concerns, the species in question are almost always mammals (f.e horses) or avian species (f.e swans). In these cases of mammals, extermination is always mentioned as "culling" but in the case of a marine

species or an insect extermination is usually signified by the word “eradication”. In fact, in an article on cats as *invasive species*, culling of stray cats is criticised but the article finishes by stating “Sorry, but the crickets are fair game” (6).

Similarly, in another article, extermination of insects is compared to “playing a twisted video game”. Meanwhile, even when the less preferred kind of *invasive species* has a charming or curious quality; *conservation* is still urged. Namely even though snakehead fishes are “impressive” and “evolutionary marvels”, they “have to be killed”.

By contrast, an article talks about “biobigotry” defined as “the persistent and often irrational desire to be surrounded only by those species of which one approves, and to exclude any animals, plants and other life forms that one finds offensive”, in a piece written about avian species. Here, it should be noted that two contradictory articles, one praising cricket murders and other talking about biobigotry, is found written by the same author a year apart.

The phenomena of “biobigotry” can be observed in another news article talking about purple martins. The article frames flocks of purple martins, a native songbird to U.S, as disruptive, as they are causing “massive amount of damage” by collectively pooping everywhere”, but also as unique creatures of whom people have no intention of killing but try to disperse by using non-lethal and safe methods such as putting grapeseed oil to the trees. The same article also states at first people confused purple martins with starlings, an *invasive species* in the U.S, and stated starlings are “perfectly legal to kill.”

Likewise, an article about cats stresses the hypocrisy between the fact of pigs and chickens having to stay in as domesticated animals, while cats can freely roam and create a “rampage”. The same article frames cats as vicious bird killers then it suddenly shifts to a pet frame by urging all cat owners to not to let their cats outdoors as it would be like “a toddler running free in traffic”. Here, the *conservation* method defines cats with a dual identity: toddlers to be controlled and cared for or when left alone, “recreational hunters” threatening the birds.

Furthermore, eating *invasive species* is hailed by several articles as a sustainable and exotic *conservation* method. Here, eating means consumption of *invasive species* as food. Usually, marine species are subjected to this kind of *conservation* method. However, in only one instance it is criticised with the possibility of creating a new industry hence further breeding of *invasive species*. For instance, wild pigs in the United States are framed as “a real Jekyll and Hyde type situation” as a preferred food source but also an ever-growing population of *invasive species*. Similarly, when goats are exterminated in the Galápagos Islands as *invasive species*; people perceive the act of killing as drying up the food supply of the island population struggling with food poverty.

5.6. Visual Elements

When it comes to visual elements, not all the news articles in the sample include them. When visual elements were present, there wasn't a dominant strain of visual framing devices. Included in the articles were photographs of *invasive species*, alive and/or dead, the habitat in question, some native species whom *invasive species* were outcompeting and people who were taking place in *conservation* efforts. Along with photographs, maps, caricatures, illustrations and videos were also used. The figures below show this diversity of visual representation. Figures 1, 2 and 3 subsequently demonstrate the photos of alive and dead animals and illustrations located in the *invasive species* coverage of *The New York Times* (See figure 1 and 2).



Figure 1: A collage of photos of alive invasive species used in *The New York Times*. Credits clockwise from top left: Don Emmert/AFP/Getty Images, David Gray/Reuters, C. Potter/Department of the Environment, via Associated Press, Rafa Huertas/Reuters, StellaNatu

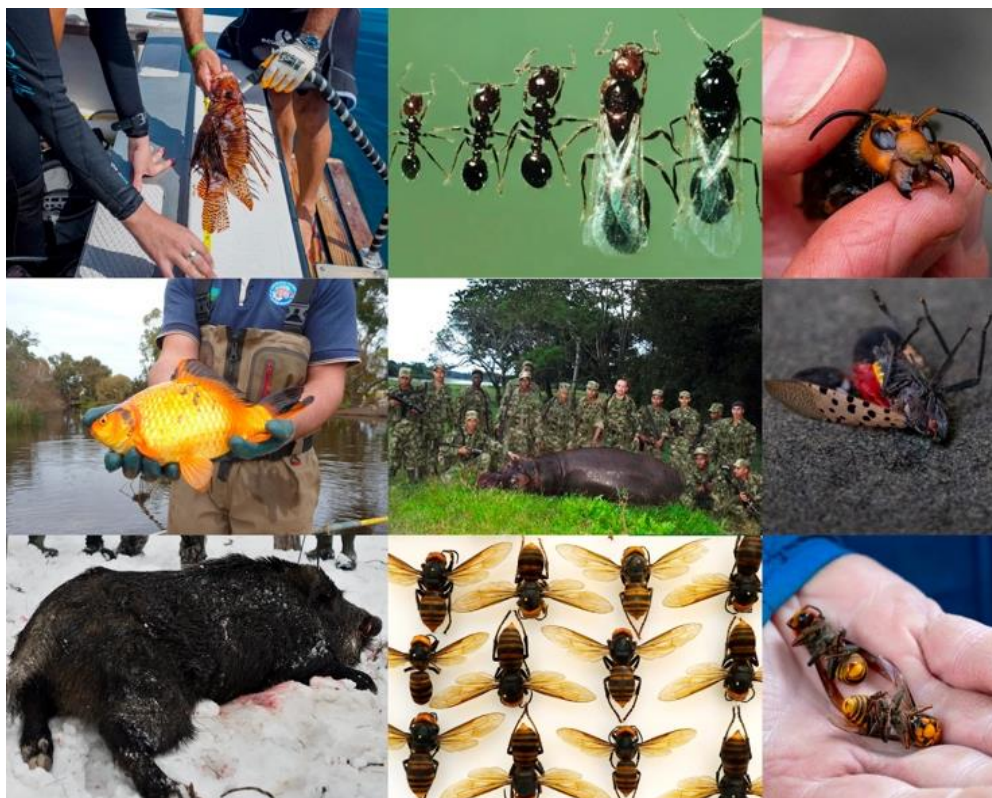


Figure 2: A collage of photos of dead invasive species used in *The New York Times*. Credits clockwise from top left: Angel Valentin/*The New York Times*, Reuters, Ruth Fremson/*The New York Times*, Stephen Beatty, Agence France-Presse/Getty Images, Dave Sanders/*The New York Times*, Sean Proctor/*The New York Times*, Ted S. Warren/Associated Press, Elaine Thompson/Associated Press.

Not all but very few visual elements throughout the sample collected from *The New York Times* allude to anthropocentric political issues of war and invasion. One instance is a caricature depicting a grey squirrel (see Figure 4). In the depiction, there is a squirrel who has just arrived to a foreign shore. It wears a knight's headdress and holds a flag saying "New Home Sweet Home" in its hand. The flag is waving and the squirrel's mouth is shaped like it's smiling. In front of the squirrel lays its two suitcases. This caricature alludes to war and invasion with the details of mediaeval warfare costume (headdress) and flag. Likewise, the suitcases represent immigration. On the contrary to this visual framing, the news article containing the caricature does not have any textual metaphors or allusions to anthropocentric issues except its title *Invaders From the New World*.



Figure 3: Untitled caricature by Victoria Adams.

6. DISCUSSION

The analysis conducted clearly shows that the dominant frame for *invasive species* in my sample of *The New York Times* is a maleficent and threatening framing. Sometimes critical and exotic framings accompany, and rarely *invasive species* are framed as benevolent or innocent. Moreover, these framings are heavily built through framing devices such as metaphors and allusions to anthropocentric political issues. In addition, the topic of *conservation* is also instrumental, with *conservation* against

invasive species is almost always urged. Consequently, this combination of results can be read as a reproduction of anthropocentric speciesism.

The malicious framing of *invasive species* is present despite the noteworthy fact that almost all of the news articles recognise human responsibility in the introduction of *invasive species* to their new habitat. According to my sample, the news coverage of *invasive species* in *The New York Times* not only reproduces anthropocentric speciesism but also discursively manufactures consent for speciesist ideology.

This chapter will discuss the results through their alignment with theoretical framework and as a reproduction of anthropocentric speciesism through to the works of Foucault and Magritte plus the theory of name calling.

6.1 Shoo Intruders, Long Live Natives

Initially, as the literature offers (Larson 2008; van der Weele et. Van Der Boomen 2008; Menozzi 2014; Davis 2021; Warren 2021) the dichotomy of native-non-native is present in the results; *invasive species* are often mentioned with an accent, through metaphors, on their non-native status. That accent rank living beings according to an anthropocentric favourability –thus, claiming non-native species are less important. This equation is surely an echo of anthropocentric concepts of belonging, citizenship, borders and nationalism (Vogelaar 2021). Additionally, such framing of ‘non-nativeness’ may imply these species “are dangerous precisely because they are not native” (Inglis 2020, 302).

Moreover, this possibility increases when *invasive species* are framed within metaphors of war, invasion and violence, another point where literature and results coincide. Scholar’s claim calling species *invasive* is already an invitation for such metaphors (Fine et Christoforides 1991; Larson et al., 2005; Larson 2008) and in line with that, my sample from *The New York Times* demonstrates there is indeed such inclination with significant metaphors evoking war, violence and invasion present in its news coverage of *invasive species*.

Actions of *invasive species* are defined as if they were an army or an attacker. These actions belong to the anthropocentric political sphere and are coming from political history of human species.

Loading such metaphors onto *invasive species* is indirectly matching them with the 'bad guys' from human history. Hence, anthropomorphising *invasive species* (Bartosch 2019). Such anthropomorphisation coupled with the dichotomy of nativity could reproduce speciesist discourses and matrixes to locate different species. To illustrate, one of the examples in the results section is when starling is "perfectly legal to kill" as an *invasive pest* but purple martin, native species, is to be protected and cherished despite having almost the same hazardous affect. The only difference between a purple martin and a starling in that case is their identity as native/non-native.

Moving on, *invasive species* are not only anthropomorphised but also objectified by metaphors of certain objects drawing imageries of war, violence and military. The metaphors are all human-made weapons or military equipment used in warfare. When *invasive species* are framed through such objectification, they are ripped off their sentience and may be perceived as a threatening object that should be destroyed for the sake of safety and peace of humans and human ecosystems.

Likewise, the metaphors of war, invasion and violence are strengthened as they are found to be used to define human responses or *conservation* approaches to *invasive species*. This locates *invasive species* in a sharp conflict with humans as if they had the intention of messing with humans or declaring a war. Not only anthropomorphising, this kind of metaphorical framing may unfairly burden *invasive species* as the enemy front.

Next, the uncontrollability of *invasive species* is underlined by adjectives and metaphors such as "voracious eating machines" and "toddlers". These might be read together within a cultural studies lens. In her book *Voracious Children: Who Eats Whom in Children's Literature* (2006), Carolyn Daniel points out to a discrepancy between primitive children's "voracious" appetites in need of discipline and civilised (and controlled) state of adulthood. She also mentions how this discrepancy and disciplining children to control their appetite is line with the protestant ethic and

dominant moral values (f.e self-control) in the Western world (Daniel 2006). Same thing may apply to *invasive species*; humans may be appalled in front of their uncontrollable “voracious” and excessive appetites. Being “voracious” might be underlining how “uncivilised” and “primitive” *invasive species* are. That’s where the “toddler” metaphor comes in: if the invasive species has a “pet” potential; it could be subject to their owner’s disciplining just like a toddler is disciplined by their parents.

6.2 Where Is Heaven and Who Gets to Live There?

As illustrated in the Results section, *invasive species* are found to be associated with non-existent imaginary and literary life forms. An obvious premise of this metaphor is of course exaggerated, maleficent and threatening framings. These metaphors also distance *invasive species* from their natural identities as animals; the creatures they are associated with are almost always supernatural. Instead, under such metaphors, *invasive species* may seem like deviant creatures going against the natural functioning of the planet Earth when in fact their very existence is an example of how the world *naturally* works under consistent and destructive human intervention. Another way to look at these strains of metaphors might be through an experimental suggestion. For instance, one of the metaphors, nightmare, is something out of the conscious realm and physical grasp of humans yet it is so close to them, produced by their own mind intangibly and uncontrollably. The metaphor might be reflecting how humans experience the feeling of loss of control when faced with established *invasive species* with a frozen and idealised imagery of natural spaces, habitat and environment they have in mind.

Correspondingly, this points to another result of the research aligning with the literature. Natural areas fictionalised as pristine places with *invasive species* as the disrupters in the news reflect a speciesist and environmentalist approach to perceiving one’s surroundings with human exceptionalism (Bartosch 2019). *Invasive species* framed as maleficent and threatening to holistic natural ecosystems is largely biased as no animal except humans can hurt the planet Earth enough to destroy it by simply moving and out competing other species. Instead, *invasive species*’ impact is only measured by its effect on humans, human-related ecosystems, other species and/or designated state of nature humans’ favour. Also, the tension between *invasive species*

and the so-called “pristine places” reflect the eco-anxiety humans feel due to their own terrible effect on the planet and the uncontrollable change of nature (Robbins et. Moore 2012).

Besides, this ideal state of nature along with *conservation* approach found in most articles, reflects how humans ideologically design spaces (natural or urban) and decides to restrict other living beings’ according to their completely speciesist reasoning. From this perspective, the results of the research also can be read as how borders of public/natural spaces are implicitly drawn with speciesist ideology and many non-human animals are exiled from their own natural environments aka Earth. Throughout the process of such *conservation*, the natural world is subjected to an anthropocentric categorisation. Then, the framing of *invasive species* exemplifies how species are accepted or rejected from the human designated spaces.

6.3 Representation of ‘Invasive Species’: Fixed or Uncertain?

To continue, results also aligned with the literature review on the media framing of *invasive species* on the presence of framing theory, perceived charisma of *invasive species*’ impact on public opinion and media coverage. There was only one instance of non-alignment on unfixed and uncertain representation suggesting there is no one hegemonic way *invasive species* are represented and nature of representation (benevolent, maleficent, etc.) may change according to the species or location of representation.

First, scholars (van der Weele et. Van Der Boomen 2008; Larson 2008; Bartosch 2019) assert that Goffman’s (1986) framing theory and Lakoff’s (1980) notion of metaphorical framing are prominent tools to study *invasive species* in the media. This researched designed within framing perspective and a special attention to metaphors finds that assertion to be true. Prior section strongly illustrates how metaphors are prominently used as framing devices.

Second, the literature review found that the perceived of charisma of *invasive species* may alter public acceptance (Nuñez and Simberloff 2005; Verbrugge et al. 2013 cited by Jarić et al. 2020). In the case for or against *invasive species*, public opinion might

be a determinant in *invasive species* management policies (Lioy et al. 2019). The sampled news coverage of *invasive species* in *The New York Times* exemplifies those findings. For instance, according to my sample; cats, swans, flamingos and parrots are some of the *invasive species* who seem to have a higher tolerance rate among public due to their charisma and this public sympathy correlates with criticisms against “conservation” practices.

Third, the literature review claims the representation of *invasive species* in the media is not fixed and always includes an uncertainty (Fraser 2006; Bremner and Park 2007 cited by Lioy et al. 2019). My sample does not fully support this claim as I found the maleficent-threatening frames to be almost everywhere in my sample of the news coverage of *invasive species* in *The New York Times*.

6.4 Looking at the Big Picture

Consequently, all of the metaphorical framing identified essentially works by the models of name calling and resemblance.

Primarily, naming is a central practice to constructing an identity and naming other is a tool to exercise power (Valentine 1998). Unfortunate euphemisms or vile nicknames may create prejudgement and shape others’ lives. Although James Valentine’s work on name calling is about humans; the same goes for non-human animals. Especially *invasive species* can be alternatively conceptualised as victims of brutal name calling. The question is: Is it speciesist to name call non-human animals while humans also do the same for their kin as well? The answer would be “Yes” because the name calling especially works to degrade only a group of nonhuman animals based on their identity and derives from the anthropocentric approach of humans. Likewise, “the popular construction of animal imagery and narratives” such as the saga of *invasive species* in the media, included in and tied with a myriad of means and processes “by which animals are commodified and the norms of human–animal relations established and sustained.” (Molloy 2011, 1). From this angle, framing of *invasive species* can also be strategically discussed through Chomsky and Herman’s Propaganda Model (PM) (1988). The PM claims that “the media serve, and propagandise on behalf of, the powerful societal interests that control and finance them” (Herman et Chomsky 1988,

6). Thus, the negative media representation of *invasive species* might be working to manufacture consent (Chomsky and Herman 1988) among public in order to “get rid of maleficent pests” without the need of a fair public debate where the animals are presented as sentient beings having their own lives and interests.

Although in case of *invasive species* the link between their maleficent-threatening image and their abrupt existence to human interests are clear; political economy of such representation might not be always visible due to how “the artificial separation of human society and the natural world masks the way in which ruling groups dominate other social groups, who are put to work in exploiting nonhuman nature” (Fisher 2013, 276).

Moreover, resemblance assumes a hierarchy (Foucault 1983). At the top of this hierarchy sits the primary reference, usually anthropocentric in its perspective whether it is anthropomorphising or objectifying. Therefore, all the meaning prescribed to *invasive species* are anthropocentric and speciesist. In this case *invasive species* are “subject to representation by resemblance” instead of their own unique existence, sentience or interests. While the fact that human mind works by metaphorical associations (Lakoff et Johnsen 1980) cannot be denied, the framing of invasive species in *The New York Times* depicts more than the simple metaphorical configuration of the human mind. As the results show, it is systematic and its ‘splendour’ proves to be more than what the eyes deploy but “defined by the sequential elements of syntax” (Magritte 1983). Hence the term *invasive species* and other metaphorical names ascribed to the original term by *The New York Times* writers become artifices to fold *invasive species* as if they were equivalents with (Magritte quoted by Foucault 1983) what humans think of them and less than other species. By the power of metaphor, *invasive species* becomes what the humans make of it, which is ultimately anthropocentric and speciesist.

7. CONCLUSION

This study conducts a qualitative analysis on the news framing of *invasive species* in *The New York Times*, focusing on textual and visual language with the purpose of exploring the underlying politically, culturally and socially constructed meanings. The

main focus of the research is the representation/framing of *invasive species* and tools used to build that representation/frame. Within this purpose, the study also specifically aims to find out if the representation and/or framing of *invasive species* reproduced anthropocentric speciesism.

The results clearly respond to the initial research questions. As a main finding, it is found that *invasive species* are dominantly framed as maleficent and threatening. As the coding valence proves to be almost always negative; *conservation* methods against *invasive species* are always mentioned and mostly urged. Secondly, metaphors and anthropocentric allusions are evident textual elements as a means to frame *invasive species*. Metaphors are either anthropomorphising *invasive species* or objectifying (as objects or food). Usually providing negative connotations for *invasive species*; metaphorical framing often uses imagery of war, military and violence. Thirdly, there are differences between the framing of different *invasive species*. Even though regardless of species most *invasive species* are discussed within their hazardous impact; mammals and avian species are represented with a more critical look and their right to live is considered more. Also, a stark difference between the framing of *invasive species* and native species is present.

The results have been discussed through their alignment with the theoretical framework. The discussion section aimed to explore possible themes underlying the framing and framing devices found in the results and contemplate on how these reproduces anthropocentric speciesism. Mainly, the results support the theoretical framework by illustrating a prominent use of framing (especially metaphorical) and associations with nativity, metaphors of war/invasion/violence, ideal state of nature in the news coverage of *invasive species*. The results also align with the theoretical framework on the point that framing of *invasive species* may influence public opinion and public opinion may influence what measures could be acceptably taken against *invasive species*. Although the results do not fully support one finding in the literature review about the uncertain nature of *invasive species* framing.

A limitation to this study is its unforeseen broadness. The results open the door to multiple and diverse topics providing a fruitful ground for discussion. However due to a conflict between this broadness and natural limits of this study, results could not be

fully discussed in detail comprehensively. A relatively weak aspect of this exploratory study might be seen as its flighty tempo between various topics of discussion.

The surprise of over abundant results and the study's self-criticism might be the perfect inspiration for other scholars though: Even within the same perspective or sampling the same publication, similar studies could be conducted with focusing on certain single framing elements or discussion points in order to have a deep dive. For instance, I believe Critical Discourse Analysis on this subject would yield to captivating results. Likewise, this study could also initiate others to do the same for different research or at comparative levels. There is plenty of room for more inspection on how *invasive species* are framed/represented in the news media.

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1. APPENDIX I: CODING SHEET

Publication Date:	
Title of the News Article:	
Length of the News Article:	
Section of the News Article:	<ul style="list-style-type: none"> a. Science b. Environment c. Politics d. Economics e. City f. Opinion g. Other:
Location of the invasive species :	<ul style="list-style-type: none"> a. Complete, literally b. Complete, figuratively

	<ul style="list-style-type: none"> c. Partial, literally d. Partial, figuratively
invasive species in the Focus of the News Article: (more than one can be selected)	<ul style="list-style-type: none"> a. invasive species as a general category b. Avian species c. Insects d. Marine species e. Squirrels f. Rabbits g. Cats h. Other mammals i. Other:
Framing of the invasive species : (more than one can be selected)	<ul style="list-style-type: none"> a. Benevolent b. Maleficent c. Threatening d. Fearmongering e. Guilty f. Innocent g. Exotic h. Critical i. Other:
Is invasive species framed through metaphors? If yes, specify the metaphor. (more than one can be selected)	<ul style="list-style-type: none"> a. Yes, anthropomorphising: b. Yes, other: c. No
Does the framing of invasive species allude to anthropocentric political issues?	<ul style="list-style-type: none"> a. Yes b. No
If Yes, Which Issues Are Alluded To? (more than one can be selected)	<ul style="list-style-type: none"> a. Immigration b. War c. Invasion d. Overpopulation e. Poverty f. Colonialism g. Other:
Is human responsibility for the spread of invasive species mentioned in the article?	<ul style="list-style-type: none"> a. Yes b. No c. Implied
Are Conservation Methods Against Invasive Species Mentioned?	<ul style="list-style-type: none"> a. Yes, urged b. Yes, criticised c. Yes, neutral d. No, non-existent
If Yes; Which Conservation Methods Are Mentioned? (more than one can be selected)	<ul style="list-style-type: none"> a. Extermination b. Sterilisation c. Eating

	d. Other ways urging the consumption the “IS” e. Other:
Notes on the Visual Elements of the News Article:	
Miscellaneous:	
Report summary:	

2. APPENDIX II: CODING INSTRUCTION SHEET

Publication Title: Type the name of the publication the news article appears in. For this research, it is *The New York Times* every time.

Publication Date: Type the publication date of the news article.

Title of the News Article: Type title of the news article.

Length of the News Article: Type length of the news article in word count.

Section of the News Article: Indicate the section under which the news article is published among the multiple choice Science, Environment, Politics, Economics, City, Opinion. If the section is not among the multiple choice, select Other and specify the section.

Location of the invasive species : Indicate the location of invasive species in the news article. The choice “Complete, literally” means the article itself is about and fully focuses on invasive species . The choice “Complete, figuratively” means the article itself is not truly about invasive species but figuratively refers to invasive species as a central element. For instance, an article conceptualising the U.S as an invasive species due to its past foreign policy would fit into this category. The choice “Partial, literally” means the article partially focuses on invasive species . The choice “Partial, figuratively” means the article itself is not truly about invasive species but figuratively refers to invasive species partially.

invasive species in the Focus of the News Article: Indicate which invasive species are mentioned in the news article. The possible categories go as: invasive species as a general category, Avian species, Insects, Marine species, Squirrels, Rabbits, Cats, Other mammals. If the focused invasive species is not among the multiple choice, select Other and specify the invasive species .

Framing of the invasive species : Indicate how invasive species are framed in the news article. Benevolent framing is coupling invasive species with desired values and attributes such as belonging whereas maleficent framing focuses on the disruptive attributes. Threatening is emphasising a threat posed by invasive species to humans, economic activities of humans, environment or other species. Fear mongering is especially present when the framing is loaded with emotional expressions tending to awaken fear and panic responses in the reader. For instance, an expression alluding to an exaggerated disaster scenario where invasive species killed every chicken in a town leaving humans without livestock to feed on would be a fear mongering frame. Guilty is when the news article places responsibility/guilt on an invasive species for their existence in a habitat or for the consequences of their existence in a habitat. Innocent framing is when the news article separates invasive species from their “invasiveness” and disruptive effects as historically displaced species adapting to a new environment. Exotic is when the quirkiness of invasive species are highlighted in the news article. Lastly, critical is when invasive species are framed by questioning the term, its underpinnings and how humans approach invasive species in any way. If the framing options in the multiple choice do not apply, choose Other and specify.

Is invasive species framed through metaphors? If yes, specify the metaphor:

Indicate if the invasive species were framed using metaphors or not. A metaphor is a tool of figurative language conveying an idea by comparing two things. An anthropomorphising metaphor is when a non-human thing is loaded with human properties through metaphor.

Does the framing of invasive species allude to anthropocentric political issues?: Indicate if the framing of invasive species alludes to anthropocentric political issues. Anthropocentric political issues are issues belonging to humanity such as a global economic crisis, a nuclear war, an international tribunal.

If Yes, Which Issues Are Alluded To?: Indicate which issue is alluded to by the framing of invasive species. The multiple choices go as: Immigration, War, Invasion, Overpopulation, Poverty, Colonialism. If the options in the multiple choice do not apply, choose Other and specify.

Is human responsibility for the spread of invasive species mentioned in the article?: Indicate whether human responsibility is mentioned in the news article as a cause for the spread of invasive species. Human responsibility in question might be globalisation, European colonialism, pest control, tourism etc.

Are Conservation Methods Against invasive species Mentioned?: Indicate whether *conservation* methods against invasive species are mentioned in the news article or not. Yes, urged signifies *conservation* methods are mentioned in an endorsing way. Yes, criticised signifies *conservation* methods are mentioned in a critical light. Yes, neutral signifies a neutral mention of the *conservation* methods while no means the *conservation* methods are not mentioned in the article at all. Theoretically, *conservation* carries an environmentalist framing and grounds its ethics in environmentalism. Environmentalism either considers the interest of humans or the interests of the ideal state of nature according to humans. In line with its environmentalist ethics, *conservation* is absolutely anthropocentric, gives only instrumental value to other living beings and speciesist as it does not consider every living being's equal interest in the processes that might affect them positively or negatively (Faria et Eze 2020). Thus, *conservation* here adheres to the *conservation* of the designated state of nature ideal to the human interest and human mind.

If Yes; Which Conservation Methods Are Mentioned?: Indicate which *conservation* methods are mentioned in the article if there is a mention. Extermination means killing the invasive species. Sterilisation means limiting invasive species' reproductive capabilities. Eating means human or non-human animal consumption of the invasive species as food or beverages. Other ways urging the consumption of the invasive species means invasive species could be consumed somehow other than eating such as raw materials for industry. If the options in the multiple-choice do not apply, choose Other and specify.

Notes on the Visual Elements of the News Article: Indicate the significance of the visual elements of the news article.

Miscellaneous: Note any other important details in the news article.

Report summary: Describe the framing of invasive species in the news article and its significance in a few sentences.

3. APPENDIX III: SAMPLE REFERENCES

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